IOWA STATE UNIVERSITY
Digital Repository

Volume 5 | Issue 2 Article 2

1942

Veterinary Medicine in China

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Need for veterinarians

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THE profession of veterinary medicine in old China was not properly respected. However, in the new China the government has been paying much attention to the livestock industry. During the past decade, several institutions designed for veterinary science research and the manufacture of biological products have been set up by the government; veterinary courses have been added to several agricultural colleges. Veterinary medicine has been especially emphasized since the war.

In certain parts of the interior of China, especially the northwestern part, the most important branch of agriculture is animal husbandry. Horses, cattle, sheep and goats are commonly raised in the north; and swine, cattle and water buffalo are the common livestock of the south. Cattle and water buffalo are used mainly as farm work animals. Goat milk is an important item in the diet of the northern people.

The important epizoötics are rinderpest, hog cholera, anthrax, glanders, foot and mouth disease, sheep pox, hemorrhagic septicemia, contagious pleuropneumonia, and swine erysipelas. It was reported that the contagious pleuro-pneumonia was acquired by introducing dairy cattle from Russia. At the present time, because of the war, other epizoötics have probably arisen.

As a matter of fact, the most violent enemy of livestock in China—not excluding even the Japanese—is infectious disease, especially rinderpest, glanders, hog cholera and anthrax. The most important job of veterinarians in China today is to combat these diseases, and that is what the limited number of them are doing. A few years before the war, veterinary laboratories were set up by the government in Shanghai, Nanking, Tsingtau, Hangchow, Lingchuan, Nannin, Chengtu and Lanchow. The first five are in the Japanese occupied area. Nannin was occupied by the Japanese in 1940 but was recaptured by the Chinese last year. All of them carried on the manufacture of rinderpest vaccine and anti-serum, and conducted control work. Some of them also manufactured anti-anthrax, anti-hog cholera and anti-hemorrhagic septicemia serum, as well as carrying on research and important control work. In 1935 a campaign was organized to combat an outbreak of foot and mouth disease in Kiangsu and Anhwei provinces. The quarantine method was employed, and the outbreak was practically cleared up in a few months.

Insurance

One of the most significant and interesting developments was carried out in Lingchuan, in Kiangsu province, where an experiment in cattle life insurance was undertaken, and in Jukau, in Kiangsi province, where a similar experiment was carried out for hogs. The life insurance plan was organized as a cooperative society. All the livestock belonging to the members of the society were registered with a payment equal to five per cent of the value of each animal. The feeding and management of the insured animals were strictly under the direction of the vet-

erinarians of the society. Veterinairy service under the plan included free immunization against rinderpest or hog cholera, and free treatment of any disease. The value of the animals lost due to disease was paid by the society.

This livestock insurance was inaugurated in 1935, the plan for cattle being developed by Dr. T. C. Wang. Typical of the cooperative spirit of the new China, the plan prospered until the Japanese occupied those provinces.

Veterinary Service

Before the war, veterinary practitioners were found only in some of the large cities, such as Shanghai, Peiping, Tientsin, Hankow and Canton, where a considerable number of dairy farms and dogs and cats could be found. There were a few American veterinarians in practice in Shanghai. In Nannin, in Kwangsi province, an American and some Philippine veterinarians helped the Kwangsi Provincial government set up a veterinary laboratory to prepare anti-rinderpest serum and vaccine.

Since the war, all the organizations in the coastal areas have been moved to the interior. At the present time, a Bureau of Animal Industry in the Ministry of Agriculture and Forestry is taking care of all the improvement of domesticated animals and handling all veterinary affairs, including the manufacture of biological products, eradication of animal diseases, and research work. Several stations have been set up in different provinces, such as Szechwan, Kweichow, Yunnan, Hunan, Kwangsi, Kwangtung and Kansu. In these stations the main job is to manufacture anti-rinderpest serum and vaccine and to control animal diseases, especially rinderpest and hog cholera. In the Szechwan province station at Chengtu, which is the largest at the present time, they are producing, besides anti-rinderpest serum and vaccine, anti-hog cholera, anti-anthrax, anti-hemorrhagic septicemia and anti-swine erysipelas serum. The Department of Animal Husbandry and Veterinary Science of the National Central University is stationed there because of the facilities which are present for laboratory work.

The work of rinderpest control and eradication is entirely under the control of the central government with the cooperation of the provincial governments. Quarantine and vaccination methods are employed. A few months after the Japanese started to invade China, in 1938, a big campaign was organized to eradicate an outbreak of rinderpest which started in the interior of China and spread through four provinces, Szechwan, Kweichow, Hupei and Hunan, over an area of about 40,000 square kilometers. The outbreak was brought under control in a few months. Rinderpest is still the most violent enemy of cattle and water buffalo, however. The campaign to control it is being continued and extended to other provinces. The control of other diseases is confined to the area close to the stations, although outbreaks reported in other places are given first consideration.

Difficult Job

In the vast area of the interior of China, it is really a difficult job for a very limited number of trained veterinarians to combat all the animal diseases. The well-trained veterinarians in China were all trained abroad, most of them in this country and many at Iowa State College. Others took their training in Japan, France, England and Germany. The army veterinarians all had their veterinary education in Japan. More than fifteen years ago the War Ministry established an army veterinary college, in which the students have been trained only for taking care of horses. I believe the army horses are taken care of much better than the domesticated animals of farmers. However, a great number of technicians have been trained in the manufacture of biological products in Shanghai, Nanking, Tsingtau, Nannin and Chengtu. An even greater number of technicians have been trained in the control of animal diseases in the field, in Nanking, Shanghai, Tsingtau, Nannin, Kweiyang, Chengtu and Chungking. They have been doing a wonderful

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by soldier keepers to various posts in isolated spots. Persons representing the enemy are instructed to approach from various directions. Accurate records are kept of the time and the distance at which the dog first takes notice, and how much ahead of the sentry he is in detecting the approach of the enemy. After a course of this training the dog is well aware that he is expected to be on the lookout, and his senses, already naturally acute, are further developed in a remarkable way. The training proceeds rather slowly because it is not possible to stage more than two or three attacks each night.

Train at Night

Day training is not necessary, and it is important that the sentry dog rest at this time, so he may be thoroughly alert when on duty. In any case, the sentry can easily detect the enemy himself in daylight, so he has no need for the dog during daylight hours. Both in training and after training when the dog is drafted into service, he must be kept during the day in a quiet and isolated spot, and not visited by anyone except the men assigned to tend him. The isolation of the dog is a most important point, because if he becomes accustomed to seeing strangers constantly, he loses his alertness and sharpness. His meal must on no account be given at night, but early in the morning when he comes off duty.

Laying Telephone Wire

The dog trained to carry a reel of telephone wire on his back is of great value to the Signal Corps. As the animal moves forward, the reel pays out the wire. For crossing a dangerous zone with speed and thus sparing the lives of signal wire operators, the dog used in this capacity is invaluable. This use of war dogs was highly successful in the first World War.

There are many other war jobs that dogs can perform such as locating and carrying first aid to wounded soldiers on the battlefield, as pack animals and sledge animals. Other jobs for which dogs are being trained remains a military secret. One story which has been received from the Russian front tells of dogs trained to attack German tanks, and by means of high explosives strapped on their backs, to destroy the tanks—and themselves. Later stories told how the dogs were still destroying the tanks but without destroying themselves. The method of attack was not revealed.

When the last battle has been fought, and the stories of the war's heroes are being told and retold, dog heroes, perhaps tank destroyers, will receive their share of glory. However, most of the dog fighters will have done their work unheard of and unsung. Their reward will be the pride which fills every dog-lover with the realization that his "best friend" has aided him and his country in the fight for victory.

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job despite limited fundamental knowledge. Most of the technicians were trained by Dr. S. C. Cheng, I.S.C. '24; Dr. C. C. Chen, I.S.C. '24; and Dr. C. S. Lo, K.S.C. Dr. S. C. Cheng also organized the campaigns against foot and mouth disease and rinderpest.

The task of the veterinarian in China is a monumental one. A handful of trained men must serve the veterinary needs of a country almost the size of the United States, supporting three times as many people, and far behind the United States in veterinary and general scientific development. Their work is further handicapped by the changes brought about by the war—the occupation of large areas by the enemy, the consequent movement of livestock, the resultant disease epidemics which accompany every war, and the difficulties of carrying out protective measures in a country waging on its own soil a life-and-death struggle with a powerful enemy. But if China's need for veterinarians is great now, it will be even more so after the war, when the work of reconstruction and rehabilitation begins. Veterinary medicine will play an increasingly important part then in the growth of the new China.